

# Application for the 2022 Tennessee Governor's School for the Sciences and Engineering at The University of Tennessee, Knoxville

# **General Information**

The Tennessee Governor's Schools offers high school students intensive learning experiences on postsecondary campuses. Each school system is encouraged to share the Governor's School information and applications with strong students who meet the criteria listed below. Nominations for the Tennessee Governor's Schools must be made by high school educators who can speak to the student's potential for success in the program. Each Governor's School convenes an application review committee to select the students invited to attend each school.

# Governor's School for the Sciences and Engineering

University of Tennessee Knoxville May 29 - June 25, 2022

The Governor's School for the Sciences and Engineering (GSSE) provides the opportunity for advanced study, laboratory experience, and research in a STEM field. You will participate in a variety of individualized and team projects that highlight many of the most exciting areas of STEM research. You will interact with leading scientists, mathematicians, and engineers in seminar discussions that emphasize research and its relation to society. Individualized and small group instruction is available in industrial engineering, materials science and engineering, biology, chemistry, mathematics, and physics. You will choose an elective course that will involve afternoon lecture and laboratory sessions in STEM. The morning courses taken by all students focus on basic scientific skills and the role science plays in our society. Other activities include lectures by experts on current trends in STEM research. In-class instruction is complemented by visits to STEM laboratories, companies with a STEM mission, and other team building exercises. The student is challenged to perform experiments, make experimental determinations, perform calculations, and communicate results by effective writing, and to consider the unique features of STEM as a professional discipline. GSSE is a four-week experience which offers students five (5) college credit hours, and exposes them to scientific disciplines in the University of Tennessee, Knoxville environment.

Prerequisites: Applicants must meet the following prerequisites -

- Possess excellent academic records and be able to demonstrate advanced critical thinking and analysis
- Must have completed at least one year of high school level laboratory science and one year of Algebra
- Have a GPA of 3.5 or higher
- Must be a rising Tennessee high school junior or senior (current sophomore or junior)

Due to the ongoing COVID-19 pandemic, the 2022 Governor Schools may be conducted in a completely virtual setting if the pandemic is still impacting Tennessee. For this application to be processed correctly please answer the following question to indicate your level of attendance interest.

# Place an "x" in the right-hand column to indicate your potential attendance status.

<ol> <li>Only if it was a resident program on a host campus</li> </ol>	
2. Only if it was a virtual program	
3. I would attend either a resident or virtual program	

### **Submitting the Application:**

Completed applications should be submitted by the nominating educator to the respective Governor's School(s). Applications submitted directly by students will not be accepted. The student may keep a copy of the application, excluding the confidential *Teacher Reference* forms and the confidential *Counselor/Administrator Verification* form; the nominating educator should keep one complete copy of the submitted application package.

# **Application Submission Instructions**

Ensure applications are complete, arranged in the correct order, and contain all required signatures and documents as outlined below.

- Nominating educators must submit applications to GSSE electronically and provide all requested information no later than the deadline listed on the application.
- 2. Each Governor's School has specific essay and writing sample questions. All questions must be answered and submitted with the application packet.
- 3. Class rank, class size, numerical test scores, etc., must be verified by the school counselor or school administrator, if available. Please note that while PSAT, SAT, and ACT scores are not mandatory, school administrators are strongly encouraged to include this information if available.
- 4. Students are to list two teachers (see school-specific list) to complete the confidential *Teacher's Reference* forms. If the teacher is not the faculty member nominating the student, he/she should return the completed reference forms directly to the nominating educator. There is a space available at the bottom of the teacher reference form to put the name of the school personnel to whom the form is to be returned.
- 5. An official transcript must be included in the application packet.

For more information on the program, please visit <a href="http://gsse.utk.edu">http://gsse.utk.edu</a>.

To apply, follow these steps on this website: https://gsse.utk.edu/2022-gsse-application/

If you have any questions, please contact GSSE by email (<u>prep@utk.edu</u>) or phone (865-974-9493). Application deadline: Tuesday, January 18, 2022

Additional guidance on completing the required forms can be found in the application packet under "Application Checklist."

Governor's Schools of Tennessee – Application Checklist
Is this application complete?
☐ Applicant Information Form
☐ Completed by Applicant/parent/guardian
☐ Certification of Application
☐ Signed by applicant
☐ Signed by parent/guardian
☐ Signed by counselor/ administrator
☐ Student Achievement Information
☐ Completed and signed by counselor/principal
☐ Confidential Teacher Recommendation 1
☐ Completed and signed by teacher 1
☐ Confidential Teacher Recommendation 2
☐ Completed and signed by teacher 2
☐ Official Transcript
☐ Questions referred to on page 6
☐ Student responds to each question

Governor's Schools of Tennessee – Teacher Recommendation Guide			
The two confidential Teacher Recommendation forms should be completed as follows:			
Governor's School	Teacher Recommendation 1	Teacher Recommendation 2	
Agricultural Sciences	Applicant's choosing	Applicant's choosing	
Computational Physics	Science teacher	Math teacher	
Emerging Technologies	Science teacher	Math teacher	
Engineering	Science teacher	Math teacher	
Humanities	English teacher	Applicant's choosing, preferably in humanities discipline	
Innovation & Entrepreneurship	Technology or business teacher	Applicant's choosing	
Integration of Biological & Statistical	Science teacher	Math teacher	
Sciences			
International Studies	Foreign language teacher, if available	Social studies teacher, if available	
Prospective Teachers	English teacher	Applicant's choosing	
Sciences & Engineering	Science teacher	Math teacher	
Scientific Exploration of Tennessee	Social studies or science teacher	Humanities or arts teacher	
Heritage			

Please list the two teachers from whom the applicant is requesting confidential teacher		
recommendations.		
	Name Subject	
Teacher 1		
Teacher 2		

# **Governor's Schools of Tennessee - Applicant Information Form**

	Stude	ent Information			
Last Name	Last Name First Name Middle		ddle Name		
Mailing Address		City		Zip Code	County
ivialing Address		City		Zip Code	County
Home Phone	(	Cell Phone		Email Ad	ldress
☐ Ma		☐ Native Americ	can		c or African American
□ Fen		☐ Asian		☐ Whit	
□ Oth		☐ Hispanic or La	itino	☐ Othe	er
	oose not Answer				
Date of Birth Gende		Race (	select all	l that apply)	
Month/Day/Year Identit			,		
	Parent/G	uardian Information			
2 16				5.1.1	
Parent/G	iuardian Name			Relations	hip to Applicant
				, TN	
Mailing Address			City		Zip Code
W 181		0 11 01			
Work Phone		Cell Phone		Email	Address
	Scho	ol Information			
School Name			District Name		
Counselor Name		Phone	•	E	Email
				, TI	N
Mailing Address		•	City		Zip Code

# Governor's Schools of Tennessee – Certification of Application **Preference Indication** Any student applying to multiple Governor's Schools Ranking **Governor's School Agricultural Sciences** must rank the schools in order of preference on this Arts form only (1=most preferred, etc.). It is not necessary to **Computational Physics** rank schools to which the student will not apply. **Emerging Technologies** Humanities Innovation and Entrepreneurship Integration of Biological & Statistical Sciences **International Studies Prospective Teachers** Sciences and Engineering Scientific Exploration of Tennessee Heritage **Student Assurances** I have not previously attended a Tennessee Governor's School, and I affirm, agree, and/or understand that all statements on this form are true and accurate; any misrepresentation or omission of material facts may result in disqualification or termination should I already be enrolled in a Tennessee Governor's School. By making this application, I and my parent/guardian agree to the release of any necessary school records to the Governor's School and the respective university for the purpose of determining eligibility. I/we understand and agree that such school records will be kept confidential and used only for determining admissibility to the Governor's School. Students who do not agree to the release of such school records for determining admissibility will not be considered for the Governor's Schools. I certify to the best of my knowledge all of the information provided in this application is correct. I acknowledge that information about me may be used for publicity purposes if I am selected to attend a Governor's School. Applicant's Printed Name Applicant's Signature Date Parent/Guardian Assurances I have carefully reviewed the information on this application and give my permission for my son/daughter to proceed with application procedures. I acknowledge that the Governor's Schools may offer university course credit and grades which will require university enrollment. I authorize the high school and its employees to release any information necessary for this application. Parent/Guardian's Printed Name Parent/Guardian's Signature Date **School Assurances** I nominate the applicant listed above for the Tennessee Governor's School and certify that the applicant meets the criteria and the prerequisites of the Governor's School to which the application is made. I recommend this student for admission to the Governor's School(s), for admission to the hosting university during summer session 2022, and for enrollment in university courses which may or may not allow the student to earn postsecondary credit and grades. Nominating Educator Printed Name Nominating Educator Signature Date

# Governor's Schools for Sciences and Engineering Application Questions

**Instructions** - Documents should be typed and submitted on a separate sheet of paper. Each question must be answered completely.

- 1. In an essay, (a) choose up to three (3) afternoon classes in our program that you may be interested in (for information, visit our web site <a href="https://gsse.utk.edu/academic-curriculum/">https://gsse.utk.edu/academic-curriculum/</a>); for each class, explain why you wish to take it and how your background qualifies you to attend. Please rank them by the course you are most interested in first. (b) Describe your most challenging experience (academic, personal, etc.) so far and how you tackled it.
- 2. In an essay, (a) describe which STEM field interests you the most, how you became interested in that field, and what you plan to do in the future to pursue that interest. (b) Pick two of the most interesting classes you have attended so far and explain what made them interesting. (c) If your school has block scheduling, what science, mathematics, or other courses related to STEM will you be taking during the spring semester?

# Governor's Schools of Tennessee - Student Achievement Information

To the counselor/school administrator: the student listed below is applying for selection to a Tennessee Governor's School. A complete application requires the following information and verification from you. While information pertaining to some of the following items may not be available for all students, please include all available information. Use the latest scores available. If your school does not rank, enter "do not rank" or "none."

school does not rank,	enter "do no	t rank" or "none."			
			Student Information		
	Last Name		First Name		Middle Name
□10 <sup>th</sup> □11 <sup>th</sup>					
Current Grade	Class Size	Class Rank	"HOPE Scholar	ship GPA"	Cumulative GPA
☐ CTE (specify career	cluster)	☐ Science and Math	n ☐ Humanities	☐ Fine Arts ☐	AP/IB □ Other (specify)
			Elective Focus		(specify)
			erequisites set forth in th		is not academically qualified, and an application should not be
			Achievement Tests		
Test (list others as app	propriate)	Grade Adm		Score	Percentile Ranking(s)
TCAP Writing Assessn		- Craderiani			. e.eeeaag(e)
- rear services					
		<u> </u>	Aptitude Tests		
Test		Grade Adm	inistered	Score	Percentile Ranking(s)
PLAN Composite					
ACT Composite					
PSAT Critical Reading					
PSAT Writing					
SAT Verbal					
SAT Math					
SAT Writing					
SAT II - specify test(s)					
		Any	Additional Relevant Test	Scores	
Name of Test		Grade Adm	inistered	Total Score / Subscores	Percentile Ranking(s)
			Attendance and Disciplin		
				2019-20	2020-21 (to date)
Number of days abse	ent				
Number of disciplina	ry referrals				
(please explain or attach disciplinary record on separate sheet)					

Counselor/Administrator Verification			
1. Please provide narrative comments about this student to help with our evaluation. Narrative comments are extremely helpful to the selection committees during the evaluation process. Use a separate sheet if necessary.			
2. Have you reviewed the student's academic records?	□ Yes		
	□ No		
3. Does the student meet the prerequisites of the Governor's School(s) to	☐ Yes		
which this application is made?	□ No		
4. In your opinion, how academically qualified is the student for the Governor's School	☐ Highly Qualified		
experience?	☐ Qualified		
	☐ Marginally Qualified		
	☐ Not Qualified		
I certify to the best of my knowledge the above results are accurately reported.			
Counselor/administrator's Printed Name			
Counselor, administrator 3 i inited Hame	1		
Counselor/administrator's Signature	Date		

Governor'sSchoolsofTenne	essee–ConfidentialTeacherRe	ecommendation		
Student Information				
Last Name	First Name	Middle Name		
Educator nominating applicant:	Dead	line to return teacher recommendation		
To the teacher: The above-referenced student is applying to attend one of the Tennessee Governor's Schools, an intensive residency program for mature, gifted, and talented students. This applicant has designated you as one of his or her teachers of reference. This recommendation form is a critically important part of the student's application and will have a significant role in the selection process. Please provide us with a candid, frank, and complete assessment of this student's maturity, attitude, work commitment, and creativity. This form will not become a part of the student's regular school records; it will be used solely by officials of the Governor's School to aid them in the selection process. The contents of this form will not be disclosed to the applicant or his/her parents/guardians. The Governor's School officials greatly appreciate your help in this selection process.				
Please return this completed form to the applicant's nominator by the date listed above.  1. How long have you known and worked with this applicant?				
2. In what situations have you served as this applicant's teacher?				
<ol><li>Please evaluate this applicant in th you have had in the past:</li></ol>	e areas below, comparing him or her with	n similar outstanding students		
Ability to learn  Learns very quickly Learns readily Average Must work hard to learn Does not learn easily	Attitude toward work  Outstanding  Above Average  Average  Can be indifferent  Lacks commitment	Dependability/consistency  ☐ Always dependable ☐ Above average ☐ Average ☐ Occasionally unreliable ☐ Usually unreliable		
Initiative  Self-directed/motivated Usually independent Completes work assigned Needs some prodding Very hesitant	Judgment  ☐ Exceptionally good ☐ Above average ☐ Average for a teenager ☐ Occasional poor judgments ☐ Frequent poor judgments	Maturity  ☐ Extremely mature ☐ Above average ☐ Average teenager ☐ Somewhat mature ☐ Very immature		
Relations with others  Exceptionally good  Above average  Average  Occasional conflicts  Many conflicts	Quality of work  Excellent  Very good  Average  Below average  Very poor	Quantity of work  Unusually high output  Above average  Average output  Not a great producer  Low output, slow		
4. How would you describe the applica  ☐ High □Average □Low	nt's punctuality?			

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# Governor's Schools of Tennessee – Confidential Teacher Recommendation (cont'd) 5. What is your best judgment about this applicant's emotional maturity and stability to deal with an intensive residency program in which he/she will meet new people, face new situations, and encounter new challenges during the weeks of the program? ☐ This applicant will adapt readily to the changes and challenges and will be a successful participant. ☐ This applicant should be able to adapt to the changes and challenges with minimal adjustment. ☐ This applicant should succeed but will have some difficulty dealing with the stress. ☐ This applicant may have some difficulty dealing with the stress and may not be successful. ☐ This applicant will have great difficulty dealing with new situations and challenges. 6. This applicant's outstanding personal qualities are: 7. The personal qualities this applicant should strive most to improve are: 8. Please indicate your overall judgment about this applicant: ☐ Very highly recommended, an outstanding student who will do well in the school. ☐ Highly recommended, a very good student who will be successful in the school. ☐ Recommended, a good student who will participate effectively in the school. ☐ Recommended with reservations, a good student but he/she may present some problems. $\square$ I do not recommend this student. 9. Summary Comments: We must select a relatively small number of students from a large pool of exceptional applicants. Please tell us something about this student that is not reflected in any of the above ratings which will help us make a decision. What makes this applicant truly exceptional? Summary comments are extremely important to the selection committees, and reference letters are acceptable. If you need more space, you may attach another sheet. Name Signature Date

Governor's Schools of Tennessee – Confidential Teacher Recommendation				
Student Information				
Last Name	First Name	Middle Name		
Educator nominating applicant:	Dea	adline to return teacher recommendation		
To the teacher: The above-referenced student is applying to attend one of the Tennessee Governor's Schools, an intensive residency program for mature, gifted, and talented students. This applicant has designated you as one of his or her teachers of reference. This recommendation form is a critically important part of the student's application and will have a significant role in the selection process. Please provide us with a candid, frank, and complete assessment of this student's maturity, attitude, work commitment, and creativity. This form will not become a part of the student's regular school records; it will be used solely by officials of the Governor's School to aid them in the selection process. The contents of this form will not be disclosed to the applicant or his/her parents/guardians. The Governor's School officials greatly appreciate your help in this selection process.				
Please return this completed form to the 1. How long have you known and		iteu above.		
1. How long have you known and	worked with this applicant:			
2. In what situations have you served as this applicant's teacher?				
3. Please evaluate this applicant in	n the areas below, comparing him or	her with similar outstanding students		
you have had in the past:	, , ,	C		
Ability to learn  ☐ Learns very quickly ☐ Learns readily ☐ Average ☐ Must work hard to learn ☐ Does not learn easily	Attitude toward work  ☐ Outstanding ☐ Above Average ☐ Average ☐ Can be indifferent ☐ Lacks commitment	Dependability/consistency  ☐ Always dependable ☐ Above average ☐ Average ☐ Occasionally unreliable ☐ Usually unreliable		
Initiative	Judgment	Maturity		
☐ Self-directed/motivated ☐ Usually independent ☐ Completes work assigned ☐ Needs some prodding ☐ Very hesitant	□ Exceptionally good □ Above average □ Average for a teenager □ Occasional poor judgments □ Frequent poor judgments	☐ Extremely mature ☐ Above average ☐ Average teenager ☐ Somewhat mature ☐ Very immature		
Relations with others	Quality of work	Quantity of work		
☐ Exceptionally good	☐ Excellent	☐ Unusually high output		
☐ Above average	☐ Very good	☐ Above average		
☐ Average	☐ Average	☐ Average output		
☐ Occasional conflicts	☐ Below average	☐ Not a great producer		
☐ Many conflicts	☐ Very poor	☐ Low output, slow		
4. How would you describe the ap	plicant's punctuality?			
☐ High ☐ Average ☐ Low	· ·			

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(cont'd)
5. What is your best judgment about this applicant's emotional maturity and stability to deal with an intensive residency program in which he/she will meet new people, face new situations, and encounter new challenges during the weeks of the program?
<ul> <li>□ This applicant will adapt readily to the changes and challenges and will be a successful participant.</li> <li>□ This applicant should be able to adapt to the changes and challenges with minimal adjustment.</li> <li>□ This applicant should succeed but will have some difficulty dealing with the stress.</li> <li>□ This applicant may have some difficulty dealing with the stress and may not be successful.</li> <li>□ This applicant will have great difficulty dealing with new situations and challenges.</li> </ul>
6. This applicant's outstanding personal qualities are:
7. The personal qualities this applicant should strive most to improve are:
8. Please indicate your overall judgment about this applicant:
<ul> <li>□ Very highly recommended, an outstanding student who will do well in the school.</li> <li>□ Highly recommended, a very good student who will be successful in the school.</li> <li>□ Recommended, a good student who will participate effectively in the school.</li> <li>□ Recommended with reservations, a good student but he/she may present some problems.</li> <li>□ I do not recommend this student.</li> </ul>
9. Summary Comments: We must select a relatively small number of students from a large pool of exceptional applicants. Please tell us something about this student that is not reflected in any of the above ratings which will help us make a decision. What makes this applicant truly exceptional? Summary comments are extremely important to the selection committees, and reference letters are acceptable. If you need more space, you may attach another sheet.
Name
Name -
Signature Date